STN Columbus

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                  SCISEARCH enhanced with complete author names
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          JUL 02
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          JUL 02
                  CHEMCATS accession numbers revised
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                  CAplus enhanced with French and German abstracts
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          JUL 26
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                  INPADOCDB enhanced with monthly SDI frequency
                  CA/CAplus enhanced with printed CA page images from
NEWS 21
          SEP 17
                  1967-1998
                  CAplus coverage extended to include traditional medicine
         SEP 17
NEWS 22
                  patents
NEWS EXPRESS
               05 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 SEPTEMBER 2007.
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FILE 'HOME' ENTERED AT 16:15:16 ON 18 SEP 2007
=> file reg
COST IN U.S. DOLLARS
                                                  SINCE FILE
                                                                  TOTAL
                                                       ENTRY
                                                                SESSION
FULL ESTIMATED COST
                                                        0.21
                                                                   0.21
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Property.values tagged with IC are from the ZIC/VINITI data file

17 SEP 2007 HIGHEST RN 947369-26-8

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STRUCTURE FILE UPDATES:

DICTIONARY FILE UPDATES: 17 SEP 2007 HIGHEST RN 947369-26-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

```
=> e pioglitazone/cn
                     PIOESTER 4248, POLYMER WITH 1,3,5-TRIS(OXIRANYLMETHYL)-1,3,5
               1
                     -TRIAZINE-2,4,6(1H,3H,5H)-TRIONE/CN
                     PIOESTER 4350-55/CN
E2
               1
                 --> PIOGLITAZONE/CN
E3
               1
                     PIOGLITAZONE 2-IMINE/CN
E4
              1
E5
                     PIOGLITAZONE HYDROCHLORIDE/CN
                     PIOGLITAZONE N-OXIDE/CN
E6
               1
                     PIOGLITAZONE NITRATE/CN
E7
              1
               1
                     PIOKTANIN/CN
E8
                     PIOLENE 1802/CN
               1
E9
                     PIOLOFORM BL 16/CN
E10
               1
                     PIOLOFORM BL 18/CN
E11
               1
                     PIOLOFORM BL 24/CN
E12
=> s e3
               1 PIOGLITAZONE/CN
L1
=> d
     ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
L1
     111025-46-8 REGISTRY
RN
     Entered STN: 31 Oct 1987
ED
      2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-
        (CA INDEX NAME)
OTHER CA INDEX NAMES:
     2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-
        (±)-
OTHER NAMES:
      5-[4-[2-(5-Ethyl-2-pyridyl)ethoxy]benzyl]thiazolidine-2,4-dione
CN
CN
     Pioglitazone
     U 72107
CN
      Zactos
      105355-27-9, 198077-89-3
DR
      C19 H20 N2 O3 S
MF
CI
     COM
SR
      US Adopted Names Council (USAN)
       IN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA,
LC
      STN Files:
        MEDLINE, MRCK*, PATDPASPC, PHAR, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH,
        SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
          (*File contains numerically searchable property data)
      Other Sources:
                         WHO
```

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Et.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1722 REFERENCES IN FILE CA (1907 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1731 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
=> s e5
L2
                1 "PIOGLITAZONE HYDROCHLORIDE"/CN
=> d
      ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
L2
      112529-15-4 REGISTRY
Entered STN: 30 Jan 1988
RN
ED
      2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-
       hydrochloride (1:1) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN
      2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-
      , monohydrochloride (9CI)
      2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-
      , monohydrochloride, (±)-
OTHER NAMES:
CN
     Actos
CN
      AD 4833
      Pioglitazone hydrochloride
CN
CN
      U 72107A
DR
      127676-30-6
      C19 H20 N2 O3 S . C1 H
MF
CI
      US Adopted Names Council (USAN)
STN Files: ADISINSIGHT, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAPLUS,
CASREACT, CBNB, CHEMCATS, CIN, CSCHEM, EMBASE, HSDB*, IMSPATENTS,
IMSRESEARCH, IPA, MEDLING, MRCK*, PATDPASPC, PHAR, PIRA, PROMT,
SR
         PROUSDDR, PS, SCISEARCH, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
            (*File contains numerically searchable property data)
CRN
     (111025-46-8)
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HC1

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

186 REFERENCES IN FILE CA (1907 TO DATE) 188 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file merck COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 18.30 18.51

FULL ESTIMATED COST

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L3 1 L1

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MERCK Number (MNO): 7533

CAS Registry No. (RN): 111025-46-8 MERCK Index Name (MIN): Pioglitazone

CA Index Name (CN): 5-[[4-[2-(5-Ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-2,4-

thiazolidinedione

 $Synonym(s) \qquad (CN): (\pm)-5-[p-[2-(ethyl-2-pyridyl)ethoxy]benzyl]-2,4-$

thiazolidinedione Drug Code(s) (CN): AD-4833

Molecular Form. (MF): C19 H20 N2 O3 S

Wgt Composition (COMP): C 64.02%, H 5.66%, N 7.86%, O 13.47%, S 9.00%.

Molecular Weight (MW): 356.44

References (RE): Insulin sensitizer. Prepn: K. Meguro, T. Fujita, EP 193256; eidem, US 4687777 (1986, 1987 both to Takeda); T. Sohda et al., Arzneim.-Forsch. 40, 37 (1990). Pharmacology: H. Ikeda et al., ibid. 156. HPLC determn in serum: W. Z. Zhong, D. B. Lakings, J. Chromatogr. 490, 377 (1989). Mechanism of action: C. Hofmann et al., Endocrinology 129, 1915 (1991); M. Kobayashi et al., Diabetes 41, 476 (1992). Effect on adipocyte differentiation: T. Sandouk et al., Am. J. Physiol. 264, C1600 (1993). Clinical evaluation in noninsulin-dependent diabetes: R. Kawamori et al., Diabetes Res. Clin. Pract. 41, 35 (1998).

PAGE 1-A

PAGE 2-A

```
Melting Point (MP):
```

Value MP deg C ======= 183 - 184

Other Properties (OCPP):

Colorless needles from DMF + water, mp $183-184^{\circ}$.

(1): Hydrochloride == DERIVATIVE == (RN.DRV): 112529-15-4 CAS Registry No. (CN.DRV): U-72107A Drug Code(s) Trade Name(s) (CN.DRV): Actos (Takeda)

Molecular Form. (MF.DRV): C19 H20 N2 O3 S . C1 H
Wgt Composition (COMP.DRV): C 58.08%, H 5.39%, N 7.13%, O 12.22%, S 8.16%, C1

9.02%. Molecular Weight (MW.DRV): 392.90

HC1

Melting Point (MP.DRV):

Deriv. | Derivative | Value

```
MP.DRV
Number
            Type
                          deg C
------
       |Hydrochloride|193 - 194
Other Properties (OCPP.DRV):
     Colorless prisms from ethanol, mp 193-194°. Sol in DMF; slightly
      sol in ethanol; very slightly sol in acetone, acetonitrile. Practically
      insol in water; insol in ether.
Therapeutic Codes (THER):
     Antidiabetic.
Referenced Patent (RPN):
     EP193256; US4687777
=> d his
      (FILE 'HOME' ENTERED AT 16:15:16 ON 18 SEP 2007)
      FILE 'REGISTRY' ENTERED AT 16:15:30 ON 18 SEP 2007
                 E PIOGLITAZONE/CN
L1
                1 S E3
L2
                1 S E5
      FILE 'MRCK' ENTERED AT 16:21:15 ON 18 SEP 2007
                1 S L1
L3
=> s 12
L4
               1 L2
=> d all
     ANSWER 1 OF 1 MRCK
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T.4
     Whitehouse Station, New Jersey, USA. All rights reserved. on STN (Number (MNO): 7533
MERCK Number
                     (RN): 111025-46-8
CAS Registry No.
MERCK Index Name (MIN): Pioglitazone
                     (CN): 5-[[4-[2-(5-Ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-2,4-
CA Index Name
                            thiazolidinedione
                     (CN): (\pm) -5-[p-[2-(ethyl-2-pyridyl)ethoxy]benzyl]-2,4-
Synonym(s)
                            thiazolidinedione
Drug Code(s)
                     (CN): AD-4833
                     (MF): C19 H20 N2 O3 S
Molecular Form.
Wgt Composition (COMP): C 64.02%, H 5.66%, N 7.86%, O 13.47%, S 9.00%. Molecular Weight (MW): 356.44
Molecular Weight
                     (RE): Insulin sensitizer. Prepn: K. Meguro, T. Fujita, EP
References
      193256; eidem, US 4687777 (1986, 1987 both to Takeda); T. Sohda et al.,
      Arzneim.-Forsch. 40, 37 (1990). Pharmacology: H. Ikeda et al., ibid. 156. HPLC determn in serum: W. Z. Zhong, D. B. Lakings, J. Chromatogr. 490, 377 (1989). Mechanism of action: C. Hofmann et al., Endocrinology 129, 1915 (1991); M. Kobayashi et al., Diabetes 41, 476 (1992). Effect on
      adipocyte differentiation: T. Sandouk et al., Am. J. Physiol. 264, C1600
      (1993). Clinical evaluation in noninsulin-dependent diabetes: R.
      Kawamori et al., Diabetes Res. Clin. Pract. 41, 35 (1998).
```

PAGE 1-A

PAGE 2-A

```
Melting Point (MP):
```

Value MP deg C ======== 183 - 184

Other Properties (OCPP):

Colorless needles from DMF + water, mp 183-184° . .

== DERIVATIVE == (1): Hydrochloride (RN.DRV): 112529-15-4 CAS Registry No. Drug Code(s) (CN.DRV): U-72107A Trade Name(s) (CN.DRV): O-72107A

Trade Name(s) (CN.DRV): Actos (Takeda)

Molecular Form. (MF.DRV): C19 H20 N2 O3 S . Cl H

Wgt Composition (COMP.DRV): C 58.08%, H 5.39%, N 7.13%, O 12.22%, S 8.16%, Cl

9.02%. Molecular Weight (MW.DRV): 392.90

HC1

Melting Point (MP.DRV):

Deriv. | Derivative | Value

Other Properties (OCPP.DRV):

Colorless prisms from ethanol, mp 193-194°. Sol in DMF; slightly sol in ethanol; very slightly sol in acetone, acetonitrile. Practically insol in water; insol in ether.

Therapeutic Codes (THER):
Antidiabetic.
Referenced Patent (RPN):
EP193256; US4687777

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COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 8.24 26.75

STN INTERNATIONAL LOGOFF AT 16:24:24 ON 18 SEP 2007